

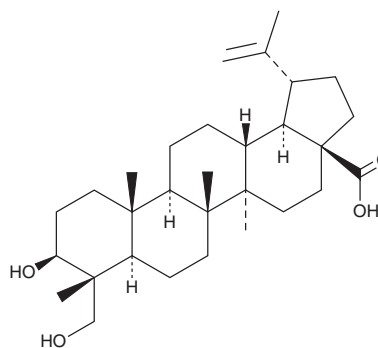
# PRODUCT INFORMATION



## 23-hydroxy Betulinic Acid

Item No. 27446

**CAS Registry No.:** 85999-40-2  
**Formal Name:** (3 $\beta$ ,4 $\alpha$ )-3,23-dihydroxy-lup-20(29)-en-28-oic acid  
**Synonym:** 23-HBA  
**MF:** C<sub>30</sub>H<sub>48</sub>O<sub>4</sub>  
**FW:** 472.7  
**Purity:**  $\geq$ 98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Plant/*Anemone chinensis*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

23-hydroxy Betulinic acid is supplied as a solid. A stock solution may be made by dissolving the 23-hydroxy betulinic acid in the solvent of choice, which should be purged with an inert gas. 23-hydroxy Betulinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 23-hydroxy betulinic acid in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

23-hydroxy Betulinic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 23-hydroxy betulinic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 23-hydroxy Betulinic acid has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

23-hydroxy Betulinic acid is a triterpenoid that has been found in *P. chinensis* and has anticancer activity.<sup>1</sup> It inhibits proliferation of K562, B16, and HeLa cells (IC<sub>50</sub>s = 39.9, 78.5, and 80  $\mu$ M, respectively), as well as human umbilical vein endothelial cells (HUVECs; IC<sub>50</sub> = 94.8  $\mu$ M). It halts the cell cycle at the S phase and induces apoptosis in K562 cells in a concentration-dependent manner with a loss of the mitochondrial membrane potential and an increase in Bax and cytochrome C protein levels.

### Reference

1. Liu, M., Zhao, X., Xiao, L., *et al.* Cytotoxicity of the compounds isolated from *Pulsatilla chinensis* saponins and apoptosis induced by 23-hydroxybetulinic acid. *Pharm. Biol.* **53**(1), 1-9 (2015).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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